

ANALYSIS OF TECHNOLOGICAL SUPPORT FOR REPRODUCTION OF PRINTING PRODUCTS

The efficiency of a modern printing enterprise depends to a large extent on the well-organized and qualitatively constructed technological process of printed products production, where versatility, flexibility and level of automation play a fundamental role.

To find possible ways to improve the management of printing production processes, the term "technological support for reproduction" was formed, which is based on the application of modern technologies, systems and technical means and management methods for reproduction of publications and packaging by entering, processing, transforming and storing information. A detailed study of the essence of technological support for reproduction and defining it as the main factor in managing the process of reproduction of information by printing means will allow to build a technologically more sophisticated process of production of printed products for enterprises of different specifics and scale of production.

The introduction of automated and maximally versatile solutions in production can reduce order execution time, reduce the impact of human factors, improve the quality of printing products and increase the flexibility of production processes, and therefore increase the productivity and profit of the enterprise. However, the automation of production processes is quite complex, time-consuming and costly. The main features of modern automation systems are the following: the availability of a common information repository, which provides the opportunity to simultaneously access the necessary information; automation of digital document flow and communication; maintaining maximum variability in types of input and output information [1-5].

When ordering along a technological route, one of the longest and most time-consuming is the pre-press stage. It is at this stage that the various technological and production features of further printing production operations should be taken into account. The main components of technological support at the pre-press stage are desktop publishing system (DTP) and CtP-system (CtP). The basis of technological support for the printing stage is printing equipment. The efficiency of the use of printing machines in the production flow of the enterprise is determined by their technological characteristics, technical and economic indicators [1-5]. The printing equipment by the method of receipt of the printed basis is divided into sheet fed or web fed.

Sheet fed printing machines are mostly characterized by formats (small 35×50 cm; medium to 50×70 cm; large 70×100 cm; super-large from 90×120 to 151×205 cm), in color (single and multicolor, one-sided and double-sided printing), by finishing possibilities (varnishing, numbering, punching, embossing, cutting, etc.), by degree of automation (with minimal control functionality, with central control system, with systems of automated control and control of processes of printing and material supply), by peripheral opportunities (systems for preparation and supply of fountain solution, inks, varnishes, drying systems, etc.), specialization (printing on paper, cardboard, plastic, film, etc.). The classification of roll printing systems can be carried out on the same grounds as for sheet machines, only division by formats and specialization.

In addition to classic printing machines, the use of digital printing systems is becoming increasingly popular as a separate component of technological support and in combination with modern combined (hybrid) printing systems. Among the most popular solutions are electrographic and inkjet systems. Digital printing systems are the most efficient in producing short print runs. Post-press processes are characterized by the diversity of a large number of production operations and related production equipment (modules, machines, units, systems). Therefore, the effectiveness of post-printing processes depends not only on production capacity, but also largely on the logistical interaction of technological support elements at this stage of production. The system of combining such elements can be implemented by the following principles: sequential combination, parallel or mixed [5].

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